Avenview

USER GUIDE

HDMI 1.3 Matrix Switch Receiver over CAT5 with IR Pass-Through

Model #: HDM3D-C5SW-R

HD ready 1080p HDMI HDCP 7.1CH Audio TRUE HD

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Section 1: Getting Started

1.1 Important Safeguards

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
    - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
    - Repair or attempted repair by anyone not authorized by us.
    - Any damage of the product due to shipment.
    - Removal or installation of the product.
    - Causes external to the product, such as electric power fluctuation or failure.
    - Use of supplies or parts not meeting our specifications.
    - Normal wear and tear.
    - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

1.2 Safety Instructions

The Avenview HDM3D-C5SW-R, HDMI 1.3 Matrix Switch Receiver over CAT5 has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the HDM3D-C5SW-R should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Do not dismantle the housing or modify the module.
- Dismantling the housing or modifying the module may result in electrical shock or burn.
- Refer all servicing to qualified service personnel.
- Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Have the module checked by a qualified service engineer before using it again.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

1.3 Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

1.4 Introduction

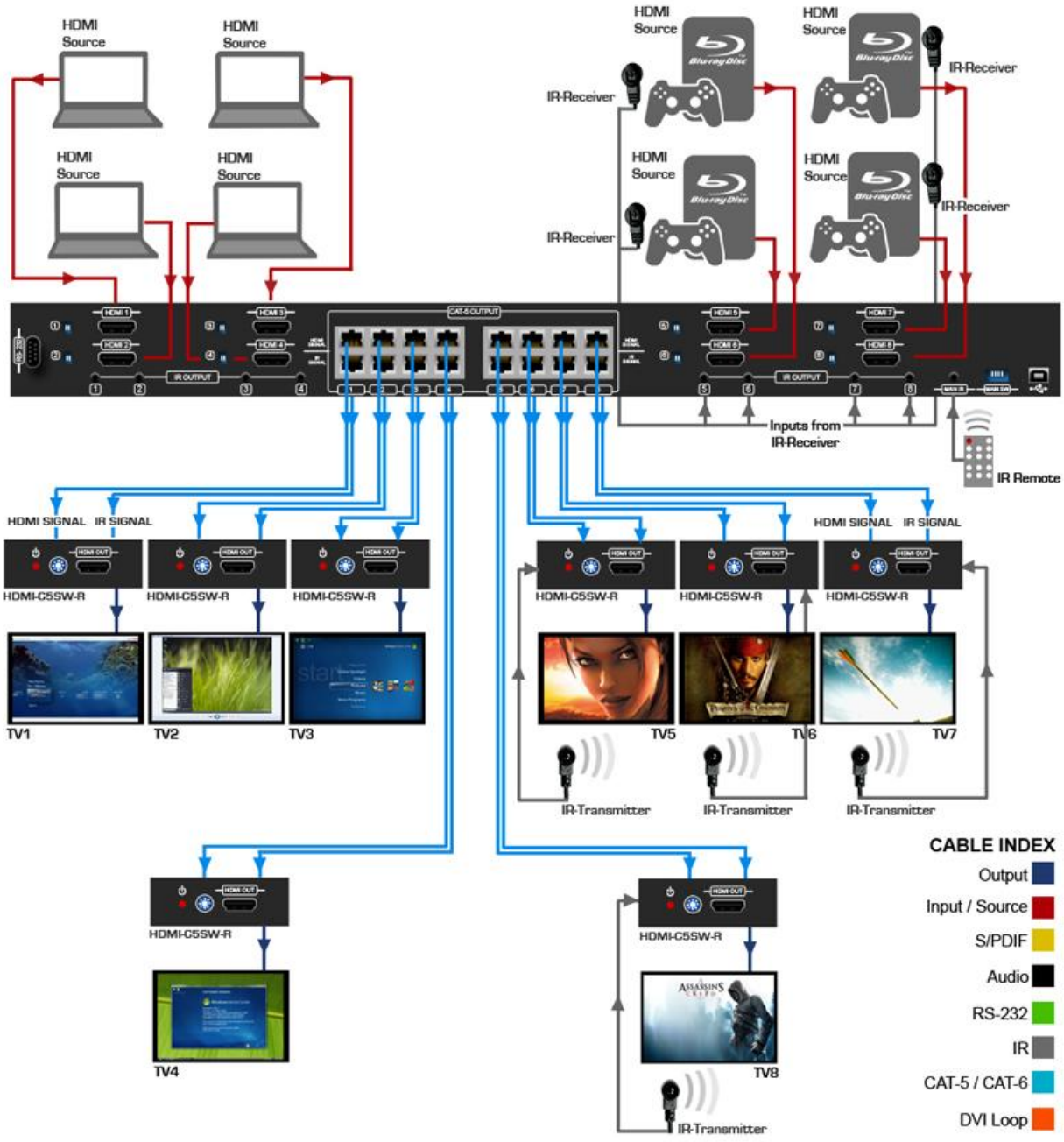
The Avenview HDM3D-C5SW-R, HDMI 1.3 Matrix Switch Receiver over CAT5 with IR Pass-through provides the most flexible and cost effective solution in the market to route high definition video sources plus multi-channel (up to 7.1 channel) digital audio from any of the four HDMI sources to the remote displays at the same time.

HDM3D-C5SW-R can be used with SW-HDM3D-C5-8X8 or SW-HDM3D-C5-4X4 Matrix Switch Series over CAT5 / CAT6.

Through low cost Cat-5/5e/6 LAN cables, not only high quality video and audio can be transmitted to the display sites, but also users can switch among four HDMI sources using the push-in button or remote control. With single power design at the source site, each remote module is easily installed without power supply. Furthermore, the built-in IR extension function makes users at display site access the DVD player, PS3 or any HDMI supported devices directly.

SW-HDMI-C5-8X8

720p/1080i = 50m (165 feet) **CAT5**
720p/1080i = 55m (200 feet) **CAT6**
1080p = 30m (130 feet) **CAT5**
1080p = 40m (165 feet) **CAT6**



CABLE INDEX

- Output
- Input / Source
- S/PDIF
- Audio
- RS-232
- IR
- CAT-5 / CAT-6
- DVI Loop

- Silicon Image chipset embedded for best quality, compatibility and reliability
- HDMI 1.3c compliant
- HDCP compliant
- Allows any source to be displayed on multiple displays at the same time
- Allows any HDMI display to view any HDMI source at any time
- Supports 7.1 channel digital audio
- Supports default HDMI EDID and learns the EDID of displays
- The matrix master can switch every output channels to any HDMI inputs by push-in button, IR remote control, or RS-232 control
- Allows controlling local HDMI sources such as DVD and TiVo by attached IR extender from remote receiver to matrix master
- Allows to control matrix master through IR remote control at remote receiver's site
- Extends video signal up to 35m (115 feet) over CAT5e at 1080p and likely longer with better HDMI source device, better grade HDMI display, and better quality solid CAT6 cable
- Easy installation with rack-mounting and wall-mounting designs for master and receiver respectively
- Fast response time – 2~5 seconds for channel

1.5 Package Contents

Before you start the installation of the converter, please check the package contents.

- HDM3D-C5SW-R x 1
- User's Manual x 1

1.6 Before Installation

- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction.
- Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.

1.7 Panel Description

1.7.1 HDM3D-C5SW-R

1. **5V DC Power jack**	2. **HDMI Signal**
3. **IR Signal**	4. **INPUT #**
5. **Input Select**	6. **EQ Level**
7. **HDMI OUT**	8. **IR Transmitter**

1.8 Installation (HDM3D-C5SW-R)

To setup Avenview HDM3D-C5SW-R with SW-HDM3D-C5-8X8 or SW-HDM3D-C5-4X4 follow these steps for connecting to a device:

1. Connect all sources to HDMI Inputs on the 8X8 HDMI over CAT5 Matrix Switch (SW-HDM3D-C5-8X8)
2. Connect each DDC output on the SW-HDM3D-C5-8X8 to respective DDC input on the remote receiver HDM3D-C5SW-R
3. Connect each TMDS output on the SW-HDM3D-C5-8X8 to respective TMDS input on the remote receiver HDM3D-C5SW-R
4. Connect IR emitter cable to the SW-HDM3D-C5-8X8 and direct the IR emitter to the build-in IR receiver of the sources
5. Connect the +5V 6A DC power supply to the SW-HDM3D-C5-8X8
6. Power on all HDMI sources
7. Power on the SW-HDM3D-C5-8X8

If a flickering or a blinking image is seen, try to adjust the rotational switch to improve the cable skew. 0 stands for the strongest EQ while 7 stands for the weakest. Try adjusting the EQ from 7 to 0

Please refer to SW-HDM3D-C5-8X8 or SW-HDM3D-C5-4X4 Matrix Switch user guides for details on how to setup IR, Software.

Section 2: Specifications

Item	Description
Units	HDM3D-C5SW-R
Unit Description	HDMI 1.3 Receiver over CAT5
HDMI Compliance	HDMI 1.3c
HDCP Compliance	Yes
Video Bandwidth	Single Link 225 MHz (6.75Gbps)
Supported Resolutions	480i / 480p / 720p / 1080i / 1080p60
Resolution and Distance	**Full HD:** (1080p) ~ 35meter (115feet) (CAT5e) / 40meter (130feet) (CAT6) **HD:** (720p/1080i) ~ 50meter (165feet) (CAT5e) / 55meter (180feet) (CAT6)
Audio Support	Surround Sound (up to 7.1 Ch.) or Stereo Digital Audio
Equalization	-8 Level Digital Control
Input TMDS Signal	1.2 Volts (peak-to-peak)
Input DDC Signal	5 Volts (peak-to-peak, TTL)
ESD Protection	- Human body model — ±15kV (air-gap discharge) & ±8kV (contact discharge) - Core chipset — ±8kV
Input	1 x RJ45 TMDS 1 x RJ45 DDC 1 x IR Socket for IR Receiver
Output	1 x HDMI
HDMI Input Selection	Push Button / IR Remote
HDMI Source Control	Through IR Control Path from IR Receiver
HDMI Connector	Type A (19 pin female)
RJ45 Connector	WE/SS 8P8C with 2 LED indicators
RS232 Connector	DE-9 (9-pin D-sub Female)
Dimensions (L x W x H)	3.3” x 3.5” x 1”
Power Supply	Mostly not required
Power Consumption	1 Watt (max) / provided by SW-HDM3D-C5-8X8

Environmental

Operating Temperature	32˚ ~ 104˚F (0˚ to 40˚C)
Storage Temperature	-4˚ ~ 140˚F (-20˚ ~ 60˚C)
Relative Humidity	20~90% RH (no condensation)

Notice

1. *If the DVI or HDMI device requires the EDID information, please use EDID Reader/Writer to retrieve and provide DVI/HDMI EDID information.*
2. *All HDMI over CAT5 transmission distances are measured using Belden 1583A CAT5e 125MHz LAN cable and ASTRODESIGN Video Signal Generator VG-859C.3*
3. *The transmission length is largely affected by the type of LAN cables, the type of HDMI sources, and the type of HDMI display. The testing result shows solid LAN cables (usually in bulk cable 300m or 1000ft form) can transmit a lot longer signals than stranded LAN cables (usually in patch cord form). Shielded STP cables are better suit than unshielded UTP cables. A solid UTP CAT5e cable shows longer transmission length than stranded STP CAT6 cable. For long extension users, solid LAN cables are your only choice.*
4. *EIA/TIA-568-B termination (T568B) for LAN cables is recommended for better performance.*
5. *To reduce the interference among the unshielded twisted pairs of wires in LAN cable, you can use shielded LAN cables to improve EMI problems, which is worsen in long transmission.*
6. *Because the quality of the LAN cables has the major effects in how long transmission distance will be made and how good is the received display, the actual transmission length is subject to your LAN cables. For resolution greater than 1080i or 1280x1024, a CAT6 cable is recommended.*
7. *If your HDMI display has multiple HDMI inputs, it is found that the first HDMI input [HDMI input #1] generally can produce better transmission performance among all HDMI inputs.*

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